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14TH ANNUAL SURVEY OF BUSINESS INVENTORIES

In the last recession, American business got caught with its inventories up. The result: As final demand sagged, firms found themselves stuck with big inventories and high carrying costs. Then, in order to get inventories back in line with sales, business in 1975 ran down stocks at an unprecedented rate, pushing economic activity down rapidly.

The silver lining to the inventory debacle of 1973-75 was that business learned something, and has since acted upon that knowledge. Thus, business' inventories-to-sales ratio has been trimmed from 1.58 in 1975 to 1.41 in 1979. Not only is the current ratio lower than it was in 1975, it is also lower than ratios prevailing in earlier years. In other words, firms on average have been gaining better control over their inventories.

Moreover, companies this year plan to tighten the reins on inventories even further, according to results from McGraw-Hill's 14th Annual Survey of Business Inventories. Sharply different inventory policies are reported, however, by manufacturing firms on one hand, and retailers on the other. If retailers carry out their plans, the result will be a huge 22% increase in the book value of inventories from March of this year to March, 1981. Manufacturers, meanwhile, intend to be very cautious, raising inventory levels by just 4% over the year. Since manufacturing inventories are roughly twice the value of retailer stocks, the overall picture sketched by the survey is one of moderation.

When manufacturers and retailers are grouped together, they plan to increase the book value of inventories by 10% from the end of March, 1980, to the end of March, 1981. Since inflation over the next year will likely be about 10%, the survey suggests that firms in the aggregate plan little if any increase in the physical volume of inventories.

When the results of the survey are extended to the economy as a whole, however, they may be biased in a conservative direction for two reasons. One is that in the past, respondents' inventory-building plans understated the amount of inventory building that actually occurred. Thus, the survey usually implies that business has a better handle on inventories than it in fact has.

The second reason the plans reported by respondents may be overly conservative when extended to the whole economy is that a recession may occur this year, and in recession years the survey has been particularly in error. In 1973, for example, manufacturing respondents reported plans to increase inventories by 0.5% in the second half of the year. The actual increase for that period was 8%. In 1974, the planned fourth quarter increase was 1.3%, compared to the actual increase of 11.6%.

This cyclical bias--i.e., the large underestimates of inventory buildups in recession years--provides evidence that inventory plans can be quickly foiled when unanticipated falloffs in sales leave firms with excessive inventories.

The retailing projections were also off the mark in recessionary periods, although the margin of error was much smaller. However, given the very large inventory increases that retailers plan this year, it is hard to imagine that the actual figures will come in higher.

Manufacturing

On a quarter-to-quarter basis, manufacturing firms responding to the survey plan small additions to inventory, averaging just 1% per quarter. (All percent changes are based on the seasonally adjusted book value of inventories at the end of each quarter.) If these plans are met, the value of manufacturers' inventories at the end of March, 1981, will be just 4% above the level of a year earlier. Since the inflation rate should well exceed 4%, manufacturers apparently plan to pare down their physical volume of inventories. Realization of those plans also implies that manufacturing's inventory-to-sales ratio should decline from recent levels of about 1.55. (In 1975, the ratio was 1.83).

Both the durable goods and nondurable goods sectors plan to keep the lid tight on inventories. The durables sector, however, plans practically to keep the lid shut: Respondents report planned quarterly increases averaging a scant 0.6% over the next four quarters. If these plans are realized, durable goods makers' inventories at the end of 1981's first quarter will be just 2% above the same quarter this year.

Nondurables industries expect to raise inventories by an average 1.5% per quarter over the next year, making the projected book value of inventories at the end of March, 1981, about 6% higher than a year earlier. The only manufacturing industries planning double-digit increases in their inventory positions over the next year are in the nondurables sector. They are food and textiles, which both plan 10% boosts.

The durables sector's greater worry over excessive inventories is also reflected by the survey finding that half of companies making durable goods felt their inventory-to-sales ratios were too high at the beginning of 1979. Just one-fourth of nondurable goods firms said their ratios were too high.

The bulk of the remaining firms in both sectors said inventory-to-sales ratios were normal.

In sum, inventory plans reported by manufacturing firms suggest that the companies are hunkering down for an economic downturn, and that they do not want to get stuck with the excessive inventories that plagued them five years ago.

Retail Trade

In contrast to manufacturing firms, retailers appear to be planning an increase in the physical volume of inventory over the next twelve months. Planned quarterly increases average 5%; and the book value of inventory from the end of March this year to the same date next year is expected to advance by 22%. Even if the current high rate of inflation persists (and forecasters expect the rate to decline somewhat), the real value of inventories will increase. The intended inventory buildup may reflect confidence based on continued strength in retail sales in the second half of 1979 and into 1980. (The survey was conducted in February and early March.)

If the survey respondents are representative of all retailers, the implication is that the inventory-to-sales ratio this year will rise in the retail trade as it has done since 1976. In recent years, the retail inventory-to-sales ratio has risen from 1.39 in 1976 to 1.43 in 1979. The peak was 1.49 in 1974.

While manufacturers this year intend to trim inventories considered overly large, the planned buildup in retailer inventories is apparently not due to depleted inventories at the beginning of the year. None of

the retailers in the survey said their initial inventory-to-sales ratios this year too low, while 83% reported ratios at normal levels and 17% said ratios were too high. The implication is that retailers expect sales to continue strong over the next twelve months.

On a quarterly basis, retailers expect the largest additions to inventories to occur in the June-September period, when inventories are slated to rise by 10.5% over the previous quarter. If firms answering the survey early in 1980 were assuming a recession in the first part of the year, the third-quarter inventory buildup could be explained in terms of preparations for economic recovery. With recession not materializing as of 1980's first quarter, the third-quarter buildup of desired inventory could be overstated. (On the other hand, a recession running through the third quarter would likely result in undesired accumulation of inventories in that quarter.)

Compared to the 10.5% planned inventory accumulation in the third quarter, retailers intend to increase inventories in other quarters through March of 1981 by an average of only about 3%.

Implications for the Economic Outlook

If the long-awaited recession occurs this year, as most forecasters believe it will, the results of this inventories survey make for good news. The reason behind this assertion is embedded in the last recession.

In 1973 and 1974, business badly misjudged the strength of final demand (total demand minus demand for additions to inventory). Consequently, companies piled up big inventories; and an addition to inventory by one firm means a sale for another firm. With lots of firms selling lots of products headed for other firms' warehouses, business looked good. In

fact, however, it was not. Inflation-adjusted consumption and fixed investment were sputtering, while the resultant inventory buildups made growth in gross national product (GNP) look positive.

The table below shows what was happening. (Amounts are in billions of 1972 dollars, at seasonally adjusted annual rates. Percent changes are at annual rates.)

		GNP	% Change In GNP	Inventory Change	Final Sales	% Change In Final Sales
1973	I	$1229.8	9.5%	$11.7	$1218.1	9.3
	II	1231.1	0.4	14.8	1216.3	- 0.6
	III	1236.3	1.7	14.1	1222.2	2.0
	IV	1242.6	2.1	25.4	1217.2	- 1.6
1974	I	1230.2	- 3.9	13.9	1216.3	- 0.3
	II	1224.5	- 1.8	9.2	1215.3	- 0.3
	III	1216.9	- 2.5	2.0	1214.9	- 0.1
	IV	1199.7	- 5.5	6.8	1192.9	- 7.0
1975	I	1169.8	- 9.6	-20.0	1189.8	- 1.0
	II	1188.2	6.4	-18.0	1206.2	5.6
	III	1220.7	11.7	2.9	1217.8	3.9
	IV	1229.8	3.0	- 4.6	1234.4	5.6

In the second through fourth quarters of 1973, the government accounts show positive growth in real GNP. At the same time, though, real final sales were weakening; and as sales fell, inventories accumulated. This accumulation was what accounted for growth in GNP.

In 1974, both GNP and final demand fell in every quarter. Business, however, incorrectly assessed demand and continued to buy stock at rates

which, after the fact, could not be justified by sales levels. (On the other hand, fears of shortages spurred some firms to stock up in the face of falling demand. And some firms were likely buying inventory in anticipation of the lifting of price controls in 1974.)

When business realized how soft demand really was, it sharply cut purchases of inventory in order to run down what was already on hand. As the chart shows, this inventory rundown hit particularly hard in the first quarter of 1975. Real GNP fell in that quarter by nearly 10%, with most of the fall caused by a huge depletion of inventory.

Moreover, even after real growth of the economy resumed in 1975's second quarter, companies continued to correct their large inventory positions, thereby putting a further crimp on economic activity. In other words, excessive inventory building followed by the need to reduce those inventories helped contribute to economic instability in the 1974-75 recession.

If firms in the economy as a whole have inventory plans similar to those of survey respondents, and if they meet those plans, a recession this year would not be accompanied by the sharp inventory swings which occurred in the last recession. The volatility of the business cycle, that is, would be moderated. Hence the good news. A major snag, though, is the questionable assumption that firms will be able to meet inventory plans. If the recession does come, firms will likely get stuck with some unwanted inventory, so that the quarter-to-quarter percentage changes as reported in in the survey will be too low.

Still, the survey indicates that business on the whole has not forgotten the experience of the last recession, and as a consequence is determined

not to repeat it.

Notes on the Survey

This survey was conducted in February, 1980, and is based on responses from 137 firms in manufacturing and retailing. Percentage changes in inventories by industry represent individual responses weighted by size of the respondent. The book value of inventories in the first column of Table I represents the actual level of total inventories (not just inventories of respondents) as reported by the Commerce Department. Projected inventory values are derived by applying the weighted percentage changes as reported by survey respondents to the initial inventory value as reported by the Commerce Department.

TABLE I

CHANGE IN THE LEVEL OF BUSINESS INVENTORIES*
(Seasonally Adjusted)
Millions of Dollars

INDUSTRY	Dec. ** 1979	March 1980	June 1980	Sept. 1980	Dec. 1980	March 1981	Dec. '79 Mar. '80	Mar. '80 June '80	June '80 Sept. '80	Sept. '80 Dec. '80	Dec. '80 Mar. '81	Mar. '80 Mar. '81
Iron & Steel	10,908	10,996	11,083	11,500	11,200	11,584	+ 0.8%	+ 0.8%	+ 3.8%	- 2.6%	+ 3.4%	+ 5.4%
Nonferrous Metals	7,609	7,525	7,612	7,799	7,721	7,583	- 1.1	+ 1.1	+ 2.5	- 1.0	- 1.8	+ 0.8
Electrical Machinery	20,585	20,503	20,706	21,273	20,868	20,966	- 0.4	+ 1.0	+ 2.7	- 1.9	+ 0.5	+ 2.3
Machinery	36,502	37,106	37,437	38,114	38,219	37,841	+ 1.7	+ 0.9	+ 1.8	+ 0.3	- 1.0	+ 2.0
Autos	7,972	7,972	7,935	7,733	7,964	8,204	+ 0.0	- 0.5	- 2.6	+ 3.0	+ 3.0	+ 2.9
Aerospace	17,400	18,425	19,117	19,437	18,966	18,237	+ 5.9	+ 3.8	+ 1.7	- 2.4	- 3.8	- 1.0
Fabricated Metals	19,279	20,194	20,823	19,940	19,519	20,236	+ 4.8	+ 3.1	- 4.2	- 2.1	+ 3.7	+ 0.2
Instruments	7,713	7,733	7,854	7,686	7,659	7,648	+ 0.3	- 2.2	+ 1.6	- 0.4	- 0.1	- 1.1
Stone, Clay & Glass	5,577	5,907	6,435	6,660	6,395	6,220	- 5.9	+ 8.9	+ 3.5	- 4.0	- 2.7	+ 5.3
Other Durables	17,831	17,758	18,565	18,510	18,846	19,101	- 0.4	+ 4.5	- 0.3	+ 1.8	+ 1.4	+ 7.6
TOTAL DURABLES	151,376	154,118	157,277	158,652	157,357	157,620	+ 1.8	+ 2.0	+ 0.9	- 0.8	+ 0.2	+ 2.3
Chemicals	16,978	18,329	19,702	20,322	19,435	19,766	+ 7.7	+ 7.5	+ 3.2	- 4.4	+ 1.7	+ 7.8
Paper & Pulp	6,779	6,769	6,655	6,865	6,836	7,006	- 0.2	- 1.7	+ 3.2	- 0.4	+ 2.5	+ 3.5
Rubber	4,750	4,944	4,977	4,972	4,821	5,046	+ 4.1	+ 0.6	+ 0.0	- 3.1	+ 4.7	+ 2.1
Petroleum	6,660	6,802	6,991	7,087	7,045	7,069	+ 2.1	+ 2.8	+ 1.4	- 0.6	+ 0.3	+ 3.9
Food & Beverages	20,326	20,643	20,346	20,794	21,050	22,774	+ 1.6	- 1.4	+ 2.2	+ 1.2	+ 8.2	+10.3
Textiles	5,848	5,975	5,972	6,123	5,933	6,578	+ 2.2	- 0.1	+ 2.5	- 3.1	+10.9	+10.1
Other Nondurables	15,138	14,923	15,174	15,397	14,565	14,907	- 1.4	+ 1.7	+ 1.5	- 5.4	+ 2.4	- 0.1
TOTAL NONDURABLES	76,479	78,385	79,811	81,560	79,685	83,146	+ 2.5	+ 1.8	+ 2.2	- 2.3	+ 4.3	+ 6.1
ALL MANUFACTURING	227,855	232,503	237,088	240,212	237,042	240,766	+ 2.0	+ 2.0	+ 1.3	- 1.3	+ 1.6	+ 3.6
Retail Trade	109,630	115,112	119,256	131,777	135,467	139,938	+ 5.0	+ 3.6	+10.5	+ 2.8	+ 3.3	+21.6
TOTAL	337,485	346,594	356,170	371,809	372,336	380,536	+ 2.7	+ 2.8	+ 4.4	+ 0.1	+ 2.2	+ 9.8

* All data refer to end of month
** Source: U.S. Department of Commerce

TABLE II

DOES YOUR COMPANY'S MANAGEMENT BELIEVE ITS INVENTORY-TO-SALES RATIO IS NOW TOO HIGH, TOO LOW OR NORMAL?*

(Percent of Companies Answering)

INDUSTRY	Too High	Too Low	Normal
Iron & Steel	30%	0%	70%
Nonferrous Metals	25	13	63
Electrical Machinery	73	0	27
Machinery	56	6	38
Autos	100	0	0
Aerospace	50	0	50
Fabricated Metals	33	0	67
Instruments	75	13	13
Stone, Clay & Glass	67	33	0
Other Durables	36	0	64
TOTAL DURABLES	51	5	44
Chemicals	36	9	55
Paper & Pulp	67	0	33
Rubber	0	0	100
Petroleum	14	14	72
Food & Beverages	18	0	82
Textiles	38	0	63
Other Nondurables	25	0	75
TOTAL NONDURABLES	26	4	70
ALL MANUFACTURING	41	5	54
Retail Trade	17	0	83
TOTAL	40	4	56

* As of February and the first half of March, 1980 when the survey was carried out.